

WHAT IS CLAIMED IS:

1. A laminated low pass filter comprising a dielectric block including a plurality of laminated dielectric layers, an input electrode, an output electrode, and outer ground electrodes, the electrodes being formed on outer side surfaces of the dielectric block, the laminated low pass filter being adapted to pass therethrough a signal inputted to the outer input electrode, only in a low frequency band, and then to output the passed signal to the outer output electrode, the laminated low pass filter further comprising:

a transmission line including a distributed constant element made of a strip line formed on a first one of the dielectric layers, while being uniformly distributed with an inductance and a capacitance, the distributed constant element being connected between the input electrode and the output electrode; and

a capacitor electrode structure having at least two layers while being connected between the input electrode and the output electrode, the capacitance electrode structure forming a capacitance connected in parallel to the transmission line.

2. The laminated low pass filter according to claim 1, wherein the capacitor electrode structure comprises:

a first capacitor electrode formed on a second one of the dielectric layers arranged beneath the first dielectric layer, and connected at one end thereof to the input electrode; and

5 a second capacitor electrode formed on a third one of the dielectric layers arranged beneath the second dielectric layer such that a predetermined capacitance is formed between the first and second capacitor electrodes.

3. The laminated low pass filter according to claim 2,
10 wherein the laminated low pass filter further comprises:

a first ground electrode formed on a first ground layer laminated over the first dielectric layer at one side of the first ground layer, the first ground electrode being connected with an associated one of the outer ground electrodes;

15 a second ground electrode formed on a second ground layer interposed between the first and second dielectric layers at one side of the second ground layer, the second ground electrode being connected with an associated one of the outer ground electrodes; and

20 a third ground electrode formed on a third ground layer arranged beneath the third dielectric layer at one side of the third ground layer, the third ground electrode being connected with an associated one of the outer ground electrodes.

25 4. The laminated low pass filter according to claim 1,

wherein the capacitor electrode structure comprises:

a first capacitor electrode formed on a second one of the dielectric layers arranged beneath the first dielectric layer; and

5 a second capacitor electrode formed on a third one of the dielectric layers arranged beneath the second dielectric layer such that a predetermined capacitance is formed between the first and second capacitor electrodes, the second capacitor electrode including a capacitor electrode formed on the third
10 dielectric layer at one side of the third dielectric layer, and connected at one end thereof to the input electrode, and a capacitor electrode formed on the third dielectric layer at the other side of the third dielectric layer in such a manner that it is separate from the capacitor electrode, while being
15 connected at one end thereof to the output electrode.

5. The laminated low pass filter according to claim 4, wherein the capacitor electrode structure further comprises:

a third capacitor electrode formed on a fourth one of the
20 dielectric layers arranged beneath the third dielectric layer such that a predetermined capacitance is formed between the second and third capacitor electrodes.

6. The laminated low pass filter according to claim 5,
25 wherein the laminated low pass filter further comprises:

a first ground electrode formed on a first ground layer laminated over the first dielectric layer at one side of the first ground layer, while being connected with an associated one of the outer ground electrodes;

5 a second ground electrode formed on a second ground layer interposed between the first and second dielectric layers at one side of the second ground layer, while being connected with an associated one of the outer ground electrodes; and

10 a third ground electrode formed on a third ground layer arranged beneath the fourth dielectric layer at one side of the third ground layer, while being connected with an associated one of the outer ground electrodes.

7. The laminated low pass filter according to claim 1,
15 wherein the distributed constant element is made of a meander-shaped strip line formed on the first dielectric layer while being uniformly distributed with an inductance and a capacitance.

20 8. The laminated low pass filter according to claim 1, wherein the distributed constant element is made of a stepped strip line formed on the first dielectric layer while being uniformly distributed with an inductance and a capacitance.